



Sequence Listing

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<120> Humanized Anti-ErbB2 Antibodies and Treatment with
Anti-ErbB2 Antibodies

<130> P1467R2

<141> 2000-06-23

<150> US 60/141,316

<151> 1999-06-25

<160> 13

<210> 1

<211> 107

<212> PRT

<213> Mus Musculus

<400> 1

Asp Thr Val Met Thr Gln Ser His Lys Ile Met Ser Thr Ser Val
1 5 10 15

Gly Asp Arg Val Ser Ile Thr Cys Lys Ala Ser Gln Asp Val Ser
20 25 30

Ile Gly Val Ala Trp Tyr Gln Gln Arg Pro Gly Gln Ser Pro Lys
35 40 45

Leu Leu Ile Tyr Ser Ala Ser Tyr Arg Tyr Thr Gly Val Pro Asp
50 55 60

Arg Phe Thr Gly Ser Gly Ser Gly Thr Asp Phe Thr Phe Thr Ile
65 70 75

Ser Ser Val Gln Ala Glu Asp Leu Ala Val Tyr Tyr Cys Gln Gln
80 85 90

Tyr Tyr Ile Tyr Pro Tyr Thr Phe Gly Gly Gly Thr Lys Leu Glu
95 100 105

Ile Lys

<210> 2

<211> 119

<212> PRT

<213> Mus musculus

<400> 2

Glu Val Gln Leu Gln Gln Ser Gly Pro Glu Leu Val Lys Pro Gly
1 5 10 15

Thr Ser Val Lys Ile Ser Cys Lys Ala Ser Gly Phe Thr Phe Thr
20 25 30

Asp Tyr Thr Met Asp Trp Val Lys Gln Ser His Gly Lys Ser Leu
35 40 45

Glu Trp Ile Gly Asp Val Asn Pro Asn Ser Gly Gly Ser Ile Tyr
50 55 60

Asn Gln Arg Phe Lys Gly Lys Ala Ser Leu Thr Val Asp Arg Ser
65 70 75

Ser Arg Ile Val Tyr Met Glu Leu Arg Ser Leu Thr Phe Glu Asp
80 85 90

Thr Ala Val Tyr Tyr Cys Ala Arg Asn Leu Gly Pro Ser Phe Tyr
95 100 105

Phe Asp Tyr Trp Gly Gln Gly Thr Thr Leu Thr Val Ser Ser
110 115

<210> 3
<211> 107
<212> PRT
<213> Artificial sequence

<220>
<223> humanized VL sequence

<400> 3

Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val
1 5 10 15

Gly Asp Arg Val Thr Ile Thr Cys Lys Ala Ser Gln Asp Val Ser
20 25 30

Ile Gly Val Ala Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys
35 40 45

Leu Leu Ile Tyr Ser Ala Ser Tyr Arg Tyr Thr Gly Val Pro Ser
50 55 60

Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile
65 70 75

Ser Ser Leu Gln Pro Glu Asp Phe Ala Thr Tyr Tyr Cys Gln Gln
80 85 90

Tyr Tyr Ile Tyr Pro Tyr Thr Phe Gly Gln Gly Thr Lys Val Glu
95 100 105

Ile Lys

<210> 4
<211> 119
<212> PRT
<213> Artificial sequence

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<220>

<223> Humanized VH sequence

<400> 4

Glu	Val	Gln	Leu	Val	Glu	Ser	Gly	Gly	Gly	Leu	Val	Gln	Pro	Gly
1				5				10					15	
Gly	Ser	Leu	Arg	Leu	Ser	Cys	Ala	Ala	Ser	Gly	Phe	Thr	Phe	Thr
		20						25					30	
Asp	Tyr	Thr	Met	Asp	Trp	Val	Arg	Gln	Ala	Pro	Gly	Lys	Gly	Leu
			35					40				45		
Glu	Trp	Val	Ala	Asp	Val	Asn	Pro	Asn	Ser	Gly	Gly	Ser	Ile	Tyr
			50					55				60		
Asn	Gln	Arg	Phe	Lys	Gly	Arg	Phe	Thr	Leu	Ser	Val	Asp	Arg	Ser
			65					70				75		
Lys	Asn	Thr	Leu	Tyr	Leu	Gln	Met	Asn	Ser	Leu	Arg	Ala	Glu	Asp
			80					85				90		
Thr	Ala	Val	Tyr	Tyr	Cys	Ala	Arg	Asn	Leu	Gly	Pro	Ser	Phe	Tyr
			95					100				105		
Phe	Asp	Tyr	Trp	Gly	Gln	Gly	Thr	Leu	Val	Thr	Val	Ser	Ser	
			110					115						

<210> 5

<211> 107

<212> PRT

<213> Artificial sequence

A1/
<220>

<223> light chain consensus sequence

<400> 5

Asp	Ile	Gln	Met	Thr	Gln	Ser	Pro	Ser	Ser	Leu	Ser	Ala	Ser	Val
1				5				10					15	
Gly	Asp	Arg	Val	Thr	Ile	Thr	Cys	Arg	Ala	Ser	Gln	Ser	Ile	Ser
			20					25				30		
Asn	Tyr	Leu	Ala	Trp	Tyr	Gln	Gln	Lys	Pro	Gly	Lys	Ala	Pro	Lys
				35				40				45		
Leu	Leu	Ile	Tyr	Ala	Ala	Ser	Ser	Leu	Glu	Ser	Gly	Val	Pro	Ser
				50				55				60		
Arg	Phe	Ser	Gly	Ser	Gly	Ser	Gly	Thr	Asp	Phe	Thr	Leu	Thr	Ile
			65					70				75		
Ser	Ser	Leu	Gln	Pro	Glu	Asp	Phe	Ala	Thr	Tyr	Tyr	Cys	Gln	Gln
			80					85				90		
Tyr	Asn	Ser	Leu	Pro	Trp	Thr	Phe	Gly	Gln	Gly	Thr	Lys	Val	Glu
			95					100				105		

Ile Lys

<210> 6
<211> 119
<212> PRT
<213> Artificial sequence

<220>
<223> heavy chain consensus sequence

<400> 6
Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Gln Pro Gly
1 5 10 15

Gly Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser
20 25 30

Ser Tyr Ala Met Ser Trp Val Arg Gln Ala Pro Gly Lys Gly Leu
35 40 45

Glu Trp Val Ala Val Ile Ser Gly Asp Gly Gly Ser Thr Tyr Tyr
50 55 60

Ala Asp Ser Val Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser
65 70 75

Lys Asn Thr Leu Tyr Leu Gln Met Asn Ser Leu Arg Ala Glu Asp
80 85 90

Thr Ala Val Tyr Tyr Cys Ala Arg Gly Arg Val Gly Tyr Ser Leu
95 100 105

Tyr Asp Tyr Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser
110 115

A/
w/
<210> 7
<211> 10
<212> PRT
<213> Mus musculus

<220>
<221> unsure
<222> 10
<223> unknown amino acid

<400> 7
Gly Phe Thr Phe Thr Asp Tyr Thr Met Xaa
1 5 10

<210> 8
<211> 17
<212> PRT
<213> Mus musculus

<400> 8
Asp Val Asn Pro Asn Ser Gly Gly Ser Ile Tyr Asn Gln Arg Phe
1 5 10 15

Lys Gly

<210> 9
<211> 10
<212> PRT
<213> Mus musculus

<400> 9
Asn Leu Gly Pro Ser Phe Tyr Phe Asp Tyr
1 5 10

<210> 10
<211> 11
<212> PRT
<213> Mus musculus

<400> 10
Lys Ala Ser Gln Asp Val Ser Ile Gly Val Ala
1 5 10

<210> 11
<211> 7
<212> PRT
<213> Mus musculus

<220>
<221> unsure
<222> 5-7
<223> unknown amino acid

A1
w/
<400> 11
Ser Ala Ser Tyr Xaa Xaa Xaa
1 5

<210> 12
<211> 9
<212> PRT
<213> Mus musculus

<400> 12
Gln Gln Tyr Tyr Ile Tyr Pro Tyr Thr
1 5

<210> 13
<211> 645
<212> PRT
<213> Homo sapiens

<400> 13
Met Glu Leu Ala Ala Leu Cys Arg Trp Gly Leu Leu Leu Ala Leu
1 5 10 15

Leu Pro Pro Gly Ala Ala Ser Thr Gln Val Cys Thr Gly Thr Asp
20 25 30

Met Lys Leu Arg Leu Pro Ala Ser Pro Glu Thr His Leu Asp Met
35 40 45

Leu Arg His Leu Tyr Gln Gly Cys Gln Val Val Gln Gly Asn Leu
50 55 60

Glu Leu Thr Tyr Leu Pro Thr Asn Ala Ser Leu Ser Phe Leu Gln
65 70 75

Asp Ile Gln Glu Val Gln Gly Tyr Val Leu Ile Ala His Asn Gln
80 85 90

Val Arg Gln Val Pro Leu Gln Arg Leu Arg Ile Val Arg Gly Thr
95 100 105

Gln Leu Phe Glu Asp Asn Tyr Ala Leu Ala Val Leu Asp Asn Gly
110 115 120

Asp Pro Leu Asn Asn Thr Thr Pro Val Thr Gly Ala Ser Pro Gly
125 130 135

Gly Leu Arg Glu Leu Gln Leu Arg Ser Leu Thr Glu Ile Leu Lys
140 145 150

Gly Gly Val Leu Ile Gln Arg Asn Pro Gln Leu Cys Tyr Gln Asp
155 160 165

Thr Ile Leu Trp Lys Asp Ile Phe His Lys Asn Asn Gln Leu Ala
170 175 180

Leu Thr Leu Ile Asp Thr Asn Arg Ser Arg Ala Cys His Pro Cys
185 190 195

Ser Pro Met Cys Lys Gly Ser Arg Cys Trp Gly Glu Ser Ser Glu
200 205 210

Asp Cys Gln Ser Leu Thr Arg Thr Val Cys Ala Gly Gly Cys Ala
215 220 225

Arg Cys Lys Gly Pro Leu Pro Thr Asp Cys Cys His Glu Gln Cys
230 235 240

Ala Ala Gly Cys Thr Gly Pro Lys His Ser Asp Cys Leu Ala Cys
245 250 255

Leu His Phe Asn His Ser Gly Ile Cys Glu Leu His Cys Pro Ala
260 265 270

Leu Val Thr Tyr Asn Thr Asp Thr Phe Glu Ser Met Pro Asn Pro
275 280 285

Glu Gly Arg Tyr Thr Phe Gly Ala Ser Cys Val Thr Ala Cys Pro
290 295 300

Tyr Asn Tyr Leu Ser Thr Asp Val Gly Ser Cys Thr Leu Val Cys
305 310 315

Pro Leu His Asn Gln Glu Val Thr Ala Glu Asp Gly Thr Gln Arg
320 325 330

Cys Glu Lys Cys Ser Lys Pro Cys Ala Arg Val Cys Tyr Gly Leu
335 340 345

Gly Met Glu His Leu Arg Glu Val Arg Ala Val Thr Ser Ala Asn
350 355 360

Ile Gln Glu Phe Ala Gly Cys Lys Ile Phe Gly Ser Leu Ala
365 370 375

Phe Leu Pro Glu Ser Phe Asp Gly Asp Pro Ala Ser Asn Thr Ala
380 385 390

Pro Leu Gln Pro Glu Gln Leu Gln Val Phe Glu Thr Leu Glu Glu
395 400 405

Ile Thr Gly Tyr Leu Tyr Ile Ser Ala Trp Pro Asp Ser Leu Pro
410 415 420

Asp Leu Ser Val Phe Gln Asn Leu Gln Val Ile Arg Gly Arg Ile
425 430 435

Leu His Asn Gly Ala Tyr Ser Leu Thr Leu Gln Gly Leu Gly Ile
440 445 450

Ser Trp Leu Gly Leu Arg Ser Leu Arg Glu Leu Gly Ser Gly Leu
455 460 465

Ala Leu Ile His His Asn Thr His Leu Cys Phe Val His Thr Val
470 475 480

Pro Trp Asp Gln Leu Phe Arg Asn Pro His Gln Ala Leu Leu His
485 490 495

Thr Ala Asn Arg Pro Glu Asp Glu Cys Val Gly Glu Gly Leu Ala
500 505 510

Cys His Gln Leu Cys Ala Arg Gly His Cys Trp Gly Pro Gly Pro
515 520 525

Thr Gln Cys Val Asn Cys Ser Gln Phe Leu Arg Gly Gln Glu Cys
530 535 540

Val Glu Glu Cys Arg Val Leu Gln Gly Leu Pro Arg Glu Tyr Val
545 550 555

Asn Ala Arg His Cys Leu Pro Cys His Pro Glu Cys Gln Pro Gln
560 565 570

Asn Gly Ser Val Thr Cys Phe Gly Pro Glu Ala Asp Gln Cys Val
575 580 585

Ala Cys Ala His Tyr Lys Asp Pro Pro Phe Cys Val Ala Arg Cys
590 595 600

Pro Ser Gly Val Lys Pro Asp Leu Ser Tyr Met Pro Ile Trp Lys
605 610 615

Phe Pro Asp Glu Glu Gly Ala Cys Gln Pro Cys Pro Ile Asn Cys
620 625 630

A1
Thr His Ser Cys Val Asp Leu Asp Asp Lys Gly Cys Pro Ala Glu
635 640 645